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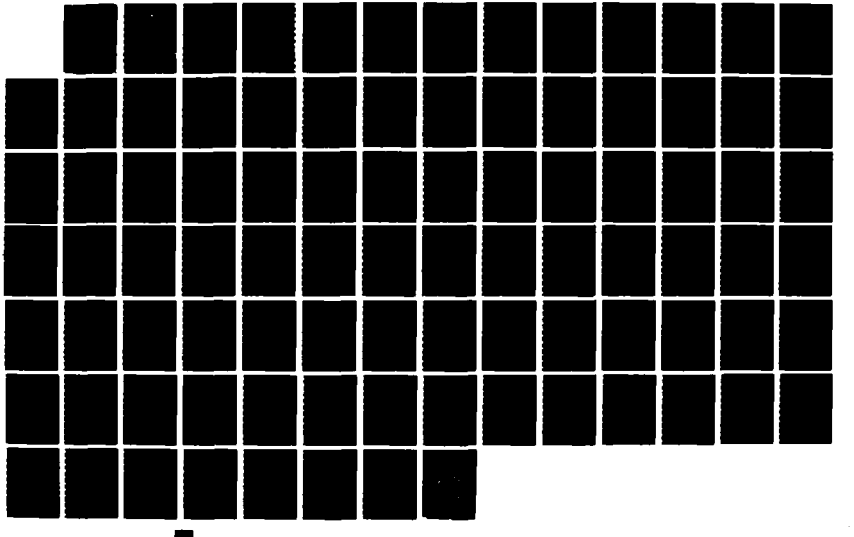

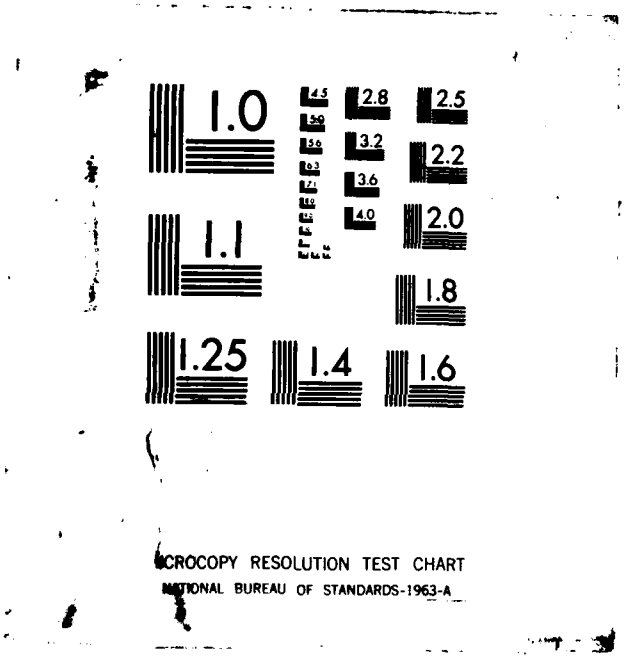
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CUSTOMER MANAGEMENT SKILLS FOR EFFECTIVE AIR FORCE CIVIL ENGINEERING CUSTOMER SERVICE

THESIS

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Captain, USAF

AFIT/GEM/DEM/86S-17

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Wright-Patterson Air Force Base, Ohio

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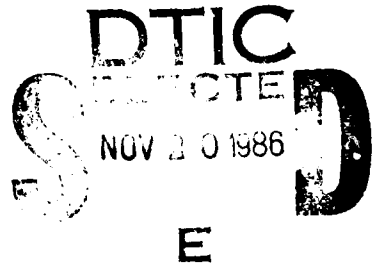

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AFIT/GEM/DEM/86S-17

CUSTOMER MANAGEMENT SKILLS FOR EFFECTIVE AIR FORCE CIVIL ENGINEERING CUSTOMER SERVICE

THESIS

Presented to the Faculty
of the School of Systems and Logistics
of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Engineering Management

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Captain, USAF

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Danny S. Long

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Abstract

This research measured the Air Force Civil Engineering customers' level of satisfaction with the service they receive from the Customer Service Units at non-TAC Air Force bases. Twenty-three characteristics identified by the researcher from an extensive literature review and from a TDY to a major Fortune 500 company were evaluated by both building managers and BCE commanders. Overall, the building managers' perception of the Customer Service Unit is slightly better than "satisfactory" (3.283) (scale values being 1 = terrible, 2 = poor, 3 = satisfactory, 4 = good, and 5 = outstanding) while the BCE commanders believe it is just short of being "good" (3.786). This is a significant difference in perception.

In addition, this research identified the five most important customer management skills the customers believe are needed for effective customer service. The identification of these beneficial customer management skills, coupled with the perception of overall satisfaction, can serve as a guide for the customer service representative to learn from and apply while working in the Customer Service Unit.

CUSTOMER MANAGEMENT SKILLS FOR EFFECTIVE AIR FORCE CIVIL ENGINEERING CUSTOMER SERVICE

I. Introduction

Chapter One introduces the research on identifying the customer management skills needed for effective Air Force Civil Engineering customer service (Note: Technical terms used in this report are defined at the end of Chapter One). The following sections contain a discussion of the general issue, specific objectives of the research, investigative questions, scope, limitations and assumptions of the study, and the definition of terms used in the research.

General Issue

In recent years, the quest for improving customer service has magnified. Texts such as In Search of Excellence, A Passion for Excellence, and Service America are now on the bookshelves, each telling various stories of successful service companies.

Good customer service is as important in Air Force Civil Engineering (AF CE) as it is in the civilian sector, and many top level AF CE managers aggressively promote it (11). As a result of their interest, some senior level Air Force Civil Engineering managers feel there has not been a well-organized effort to determine how AF CE units can improve customer service (20). This perceived need for improvement served as the starting point for this research.

To determine if customer service improvements actually were necessary, this researcher had to determine how civil engineering customer service was currently working. Regardless of customer service effectiveness, research was needed to measure current customer perceptions of satisfaction and to identify those customer management skills needed by the customer service representative to promote high customer satisfaction. This perception of overall satisfaction, coupled with the identification of beneficial customer management skills, can serve as a guide for the customer service representative to learn from and apply while working in the customer service unit.

Specific Objectives of the Research

According to recent literature, there are three equally important areas contributing to effective customer service in the service industry. Albrecht and Zemke, in their text Service America, identified these areas as the service strategy, the system, and the people (1:41). Other Air Force Institute of Technology researchers (24:1981, 17:1983) have published related theses on the first two areas, but little research had been conducted on the third, the people. As a result, this study focused on the people aspects of customer service and answered the following research questions:

1. What is the current Air Force Civil Engineering customers' perception of satisfaction with the customer service they receive?

2. What customer management skills do Air Force Civil Engineering units need for effective customer service?

Investigative Questions

To answer the research questions, the following investigative questions were answered:

1. Who are the customers of the Air Force Civil Engineering Customer Service Unit?

2. Do their perceptions of customer service vary by major air command or size of military installation?

3. What kinds of customer service representative characteristics are important to the customer?

4. How well is the Air Force Civil Engineering customer service representative performing in these areas?

Scope, Limitations, and Assumptions of the Study

The scope of this study was limited to:

1. Non-TAC civil engineering units within the continental United States (CONUS) operating in a peacetime environment. TAC units are the subject of a separate study by Captain Kenneth Singel, Air Force Institute of Technology, Graduate Engineering Management Class 86S;

2. The perceptions of base civil engineers and building managers (military personnel only, because they are the largest proportion of the building managers and because of the time constraints imposed for obtaining approval for the survey. It is assumed that the civilian building manager's answers would be similar to the military's and thus would not change the data);

3. Identifying the customer management skills needed for effective service in the Customer Service Unit of the Production Control Center located within each civil engineering unit. This study did not implement any findings. Follow-on efforts will be required to field test and validate the research findings before they are implemented.

In addition, this research effort was based on these assumptions:

4. Overseas civil engineering organizations are more concerned about wartime readiness than are units located in the CONUS.

5. The customer management skills considered to be most important in defining effective customer service will be dependent on the respondent's perceived level of the civil engineering unit's customer service performance.

6. High customer satisfaction is an indicator of an effective customer service program.

Definitions of Terms

1. Air Force Civil Engineering (AF CE)--a generic reference to the base civil engineering group, squadron, flight, or unit.

2. AFLC--Air Force Logistics Command

3. AFSC--Air Force Systems Command

4. ATC--Air Training Command

5. Base Civil Engineer (BCE)--the military commander of the base civil engineering group, squadron, flight, or unit.

6. Building Manager--the non-civil engineering individual assigned care, custody, and protection of assigned real property (10). It is this person who will most often call on civil engineering to obtain service.

7. Customer Satisfaction--a measure of how pleased or displeased a customer is (normally determined by the

customer's perception of how services rendered meet requirements).

8. Customer Service Representative (CSR)--should be highly qualified Air Force Specialty Code 555xØ personnel with a thorough knowledge of Base Civil Engineering. These personnel are the customer service unit staff and deal with the customer (9:18).

9. Customer Service Unit (CSU)--the part of the Base Civil Engineering Production Control Center that serves as a liason between the Operations Branch work force and its customers (9:16).

1Ø. MAC--Military Airlift Command

11. Operations Branch--those personnel who identify, receive, approve, authorize, direct, control [and complete] work accomplished inservice (9:12).

12. Production Control Center--the place where people are in communication with and control the in-service resources of the BCE. It provides a visable source of information vital to the BCE and his staff. It is the intersection of planning, direction and controlling, the hub of civil engineering operations.

13. SAC--Strategic Air Command

14. Service--conforms to the industry definitions favored by the Bureau of Labor Statistics (BLS) in Washington, D.C. BLS divides the economy into goods-producing sector-farming, mining, construction and manufacturing--and a service producing sector that includes literally everything else (15:38).

15. SPACECOM--Space Command

16. TAC--Tactical Air Command

II. Literature Review

Chapter Two contains a literature review on customer service and introduces the service triangle developed by Albrecht and Zemke in their text, Service America. In addition, it discusses what theorists say about customer service and identifies attributes they feel are important to make it effective. Finally, this chapter focuses on one specific area of the service triangle--people--and explains how Air Force Civil Engineering is supposed to handle customer service within the individual Customer Service Units.

The Service Triangle

In Chapter One, service was defined to be everything not covered elsewhere in the goods-producing sector of our economy (15:38). This is a broad definition and must be refined further. According to Albrecht and Zemke,

> Service . . . is an ongoing relationship between buyer and seller that focuses on keeping the buyer happy with the seller after the sale. This is a relationship undertaken not for vague public-image purposes, but for vital economic ones [1:14].

Today, approximately 70% of all jobs are service related (15:38). Regardless of whether the customer service program is part of a top diversified company like RCA (25:176), a high ranking retail company like Sears Roebuck (25:190), or a Base Civil Engineering squadron, one factor is common to all of them. Specifically,

> Although many factors can influence a firms' success, one critical factor is its degree of marketing orientation, that is, the extent to which it has embraced the corporate philosophy of customer need satisfaction known as the marketing concept [19:28].

Albrecht and Zemke recognized the need for customer satisfaction and developed a concept they called the service triangle. In this triangle, they identified three factors that they felt outstanding service companies have in common. First, each company has a well-conceived strategy for service--a service strategy (1:39).

> A service strategy is a distinctive formula for delivering service; such a strategy is keyed to a well-chosen benefit premise that is valuable to the customer and that establishes an effective competitive position [1:64].

The authors stressed the need for this strategy because they felt it positioned the service organization within the market place (1:65), provided a unifying direction for the organization, and let service people at the frontline know what management expects of them and what is important in the organization (1:67).

The authors called the second part of the service triangle "the service system."

> The service system is all of the apparatus, physical and procedural, that the service people have at their disposal to meet the customers' needs. It is the means to deliver the service and the key to its success is that it be customer-friendly; a basic design making it easy for the customer to be satisfied [1:77].

Albrecht and Zemke also point out that for the service system to be effective, the service organization must have a clear understanding of the wants, needs, and expectations of the customer (1:82). They go on to explain that their acid test to determine if an existing system is designed properly, is to see if it operates solely for the convenience of the organization or for the satisfaction of the clientele (1:84).

The final part of the service triangle is people.

> The frontline people need to operate with a consistently high level of concern about, and attention to, the needs of the customers . . . If service people are unfriendly, unhelpful, uncooperative, or uninterested in the customers' needs, the customer tends to project the same attitude onto the organization as a whole [1:98].

People within a service organization can be categorized three ways. First are the primary service people--those who have direct, planned contact with the customer. Closely linked to them are the secondary service people--those who serve the customer unseen, but who do have incidental contact with the customer. The last group of people within a service organization is the service support people--literally everyone else (1:106).

The authors illustrate their concept as shown on the next page:

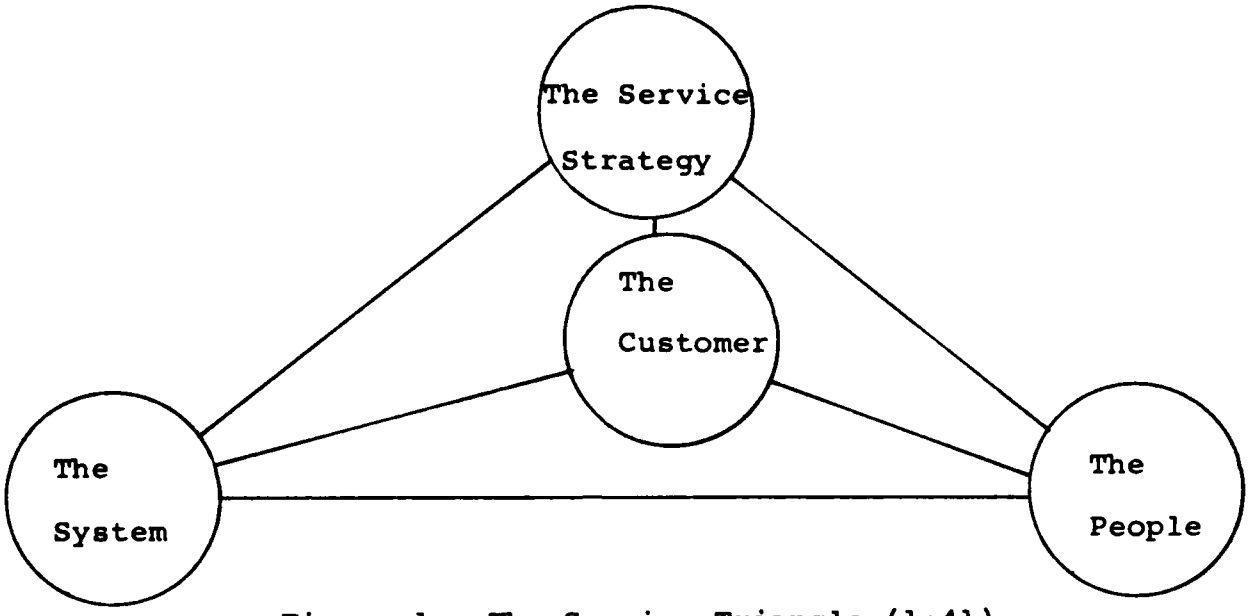

Figure 1. The Service Triangle (1:41)

According to them, by integrating all three of the triangle parts into a workable system, the organization exists to truly serve the needs of the customer.

Attributes for Effective Customer Service

Customer service theorists vary on what they feel is important for effective customer service. As a result, certain critical customer management skills may be overlooked by training supervisors because no one can agree on what needs to be taught. Consequently, it is important to review several different approaches.

Captain McKnight and Captain Parker, in their 1983 thesis Development of an Organizational Effectiveness Model for Base Civil Engineering Organizations, identified 37 criteria for organizational effectiveness (17). The authors noted that three of these criteria; public relations,

professional image of the civil engineering Customer Service Unit, and customer satisfaction--were considered important for organizational effectiveness by wing, base, and civil engineering commanders (17:109).

> ...Customer image [is considered important because it] refers to all of the conscious actions of the organization and its members to influence the opinions of its customers [17:99].

From their research, McKnight and Parker determined that civil engineering public relations efforts were lacking and as a result, "CE frequently, and very unfortunately, gets the reputation for seeking ways to get out of tasks--instead of a "can do" attitude" (17:171).

Jack Falvey, a noted business consultant and writer, recognized this dilemma of a poor customer service reputation and offered the following ideas. First, he stressed the need not to let the untrained near [the] customer. The results could be catastrophic. Second, he asked the question "Is eight hours too long?" In other words, should the work force be rotated on a more frequent basis? Third, he encouraged good contact. Fourth, he said to accentuate the positive; meaning highlight what went right. Finally, Falvey stressed the need for an award program--reward the top customer service performers (13:67-69).

Thomas Peters labelled people (22:5) as key factors in customer service and identified eight attributes he discovered in the excellent innovative service companies he

studied. The first attribute Peters discussed was a bias for action--for getting on with it. Second, the successful companies were close to the customer. These companies learned from the people they served. They provided unparalleled quality, service, and reliability--things that work and last (21:13-15). Third, Peters felt autonomy and entrepreneurship were important. Fourth, Peters stressed productivity through people. He advanced this idea when he stressed that every element of an organization should actively look for ways that it can specifically contribute to differentiating the product or service (22:107-110). Other related attributes included a hands-on, value-driven attitude, sticking to the knitting, simple form, lean staff and finally, simultaneous loose-tight properties (21:13-15). Of these, Peters stated that the most important attribute is being close to the customer.

Albrecht and Zemke, in their book Service America, stressed criteria they felt were important for good customer service. They are:

1. Care and concern. (1:33-34)
2. Spontaneity [a way to "jockey" the system on the customer's behalf]. (1:33-34)
3. Problem solving. (1:33-34)
4. Recovery [offsetting the negative aspects of a foul-up]. (1:33-34)
5. Selling service as a product [public relations]. (1:36)

6. A well-conceived strategy for service . . . directs the attention of the people in the organization toward the real priorities of the customer. (1:39)

7. Customer-oriented frontline people. (1:39)

8. Customer-friendly systems. (1:39)

9. Image . . . a managed perception on the part of the customer of the way the company does business. (1:61)

10. Maturity and self-esteem. (1:114)

11. Social skill [articulate, establish rapport]. (1:114)

12. Tolerance for contact [being able to deal with people on a regular basis]. (1:114)

People

The need for customer satisfaction and the importance of customer service personnel are expressed both as part of general civil engineering operations and civilian industry operations. Within civil engineering,

> No other base organization [so] directly affects the living environment of every person on a base as does the [Air Force Civil Engineering] organization. It is essential that [AF CE] personnel know the importance of each customer contact in terms of [AF CE] response and behavior [9:9].

The frontline people directly involved with this contact (the primary service people as defined earlier) are the customer service personnel. AFR 85-1, Resources and Work Force Management, expresses specific requirements for these Customer Service Unit personnel.

> Selection of customer service specialists must be based on the individual desire and ability to deal effectively with the customer. These individuals

> should be highly qualified [Air Force Specialty Code] 555x0 personnel with a thorough knowledge of [AF CE] [9:18].

The literature points out that while service organizations and their people should promote high customer need satisfaction, the opposite was true. Researchers conducted a survey of 1000 service firms and found these organizations scored low with regard to customer need satisfaction. Especially noticeable was the relative weakness of local firms with respect to 1) contacting service customers to see if they were satisfied, and 2) regularly collecting information about customer needs (19:30).

Base Civil Engineering is supposed to evaluate customer satisfaction by using the AF Form 1255, Quality Control Evaluation (9:17), but personal experience from managing the program has shown the feedback rate varies widely. Current literature shows that this problem of varied feedback is inherent in other service organizations also. "Many service companies have failed to take to heart the fundamental lesson that the quality of point of sale contact is crucial" (14:89). The feedback problem stems from the service organizations' not having proper training and not knowing how to

1. Determine what information is required.
2. Identify the data necessary to provide that information.

3. Establish the most practical means to collect, process, store, retrieve and distribute these data [16:16].

An important aspect of making the primary service people deal with their customers more effectively is training. The literature identified a weakness in this area. "Management hires customer service employees, gives them inadequate training, and throws them into the job" (14:92). Air Force Civil Engineering appears to lack adequate customer service training. Specifically, the training program for Air Force Specialty Code 555xØ's, the highly qualified people asked for in AFR 85-1, does not at this time include customer service training.

Several articles did point out that civilian service company management was working to reverse the improper training trend.

> To develop [a] winning spirit, management must be willing to devote the time and money to a training program that instills the knowledge, confidence, and friendly, caring attitude indispensable to good customer service [14:92].

The steps taken by civilian industry have varied, but many service companies have developed their own training programs. "Because they directly represent the organization, high-contact workers need interpersonal skills and knowledge of policies under which the firm operates" (2:1042). As a result, the customer service industry looked at many of the same attributes identified by theorists (presented earlier)

and decided to develop customer management skills in its people.

Customer management skills are taught because

> service firms, regardless of their industry, size, geographic scope, primary customer groups, or competitive situation, can and should conduct business on the basis of satisfying customer needs [19:28].

Albrecht and Zemke made the same point.

> The capacity to serve customers effectively and efficiently is an issue every organization must face. No one can evade this challenge: manufacturers and traditional service providers, profit-making and nonprofit organizations, private-sector and public enterprises must all face the task of responding effectively and efficiently to customers who expect quality and service [1:18].

One company, Xerox Corporation, has listed seven areas of customer management skills they teach. They are:

1. Obtaining customer acceptance. (3:9)
2. Concluding the call. (3:53)
3. Offering proof. (4:5)
4. Supporting. (5:9)
5. Introducing a recommendation. (6:7)
6. Probing. (7:5)
7. Handling objections. (7:75)

The company publishes a small course book for each area and then ties them together in a learning system package. The package is designed to show customer service personnel how to properly handle a service call (8:36).

National Cash Register Corporation (NCR) is another company with an excellent customer service training program. During a recent (21-22 July 1986) offering of their course Winning Through Customer Service, NCR stressed five areas it felt were important for effective customer service. These areas were

1. The Field Engineer's Role as a Professional.
2. Essential Communication Skills.
3. Phases One and Two of the Customer Service Transaction.
4. Phases Three and Four of the Customer Service Transaction.
5. Dealing with Difficult Customer Transactions [18:1-4].

For the first area, NCR stressed the importance of a professional image to the customer, to the individual customer service representative, and to the company. According to the company view,

> When you look and act the part of a competent and successful professional, you feel that way too . . . . A professional image smooths your path when you are attempting to establish a good working relationship with your customer. It will therefore make your job easier [18:1-9].

NCR also stressed the use of good communication skills for effective customer service. The skills NCR advocated were listening/observing, questioning, verifying, and explaining (18:2-1). Through the use of video segments and group exercises, the company illustrated how the skills were

interrelated, thus showing the need to use all of them, not just one or two.

The next two areas NCR stressed dealt with the four phases of its customer service transaction model--a step by step procedure for conducting customer service transactions (18:3-1). The model was similar to the Xerox Corporation's model in that it showed the customer service representatives how to establish a professional relationship with the customer, how to determine the problem situation, how to perform the service, and how to complete the transaction (18:3-1). For each of these areas, the training program contained a series of video segments and role playing scenarios designed to help the customer service representatives integrate the skills needed for an effective service call.

The last area the NCR training program covered was how to handle difficult customer situations. Specifically, the representatives learned and practiced two techniques for dealing with angry customers: calming, which consists of listening to the customer and showing empathy for the customer; and focusing, an attempt to redirect the customers' attention back to the service problem (18:5-1). These skills were also developed with the help of video segments and role playing scenarios.

Though developed by separate companies, the two programs stressed the need to promote the "winning spirit" mentioned

earlier and are just two of many taught throughout the industry.

The Department of Defense has also expanded the "winning spirit" idea mentioned earlier. From a broad perspective, the current Deputy Assistant Secretary of Defense (Installations), Mr. Robert A. Stone, developed the Excellent Installations Program, designed to "provide for our customers--the soldiers, sailors, marines, and airmen who defend America--excellent places to work and live, and excellent base services" (23). This is done through the principles of serving the customers, managing for excellence, paying for excellence and fostering the excellent installations approach (23). From a more specific perspective, the Air Force Institute of Technology, School of Civil Engineering includes customer relations as part of its Base Civil Engineering Course offered to newly assigned civil engineering officers and civilians. (However, the course does not directly help the 555xØ personnel because they are ineligible to attend).

Within civil engineering, the frontline (primary service) people charged with promoting the "winning spirit" idea work in the Production Control Center and are assigned to the Customer Service Unit. The Customer Service Unit serves as a liason between the Operations Branch work force and its customers (9:16). The CSU maintains positive control of all work requirements from the time it receives them until

the civil engineering squadron either completes the work or schedules it in a firm completion program (e.g., In-Service Work Plan) (9:18). The basic principle for the Customer Service Unit is to keep civil engineering work requirements flowing smoothly and to keep the customer informed. Specifically, the CSU

> receives, reviews, processes, and controls work requests; operates and manages a [Do-it-Now] service call desk; answers customer questions; helps customers prepare requests; initiates, processes and controls in-service work authorization documents [9:18].

To illustrate how the Customer Service Unit operates, suppose a water pipe breaks in the command post and one of the people there calls the civil engineering service call desk (an extension of the SU) to have the leak repaired. The service call specialist documents the call, radio dispatches a repair crew, and then monitors the work until it is completed. As work requirements vary, so does the level of service.

The material in this chapter has served as a starting point for reviewing customer service, for reviewing what theorists say about various customer service attributes, for discussing customer service people, and for discussing how Air Force Civil Engineering handles customer service within individual Customer Service Units.

III. Methodology

This chapter presents an explanation of the research methodology. The discussion is divided into the following sections: description of the populations and samples, survey instrument, and analysis.

Introduction

Various theorists have emphasized different attributes and skills they felt important for effective customer service. They also identified several skills, such as competence and communication ability, that have worked in many different situations. The objective for this research was to identify those common skills that, when applied, would be most effective within the Air Force Civil Engineering Customer Service Unit. To do this, the researcher used a three-step approach. First, a standard was needed. In the absence of an industry standard, the approach was to investigate current literature and to develop from it the attributes of an effective customer service representative. Second, it was necessary to determine customer perception of AF CE customer service.

> Since Civil Engineering efforts are so visible to base personnel, civil engineering personnel are in the position of trying to get the job done to everyone's satisfaction (AFR 85-1, 1982). Many people and organizations evaluate civil engineering's performance on those aspects in which the users have direct involvement [17:5].

Finally, a Base Civil Engineer (BCE) profile of the current customer service representatives was needed. This would

serve as a source for comparing how the commanders felt their customer service representatives were doing versus what the customer perceived.

Description of Populations and Samples

After carefully considering different categories of people who could be classified as Air Force Civil Engineering customers, the author decided to use building managers. The rationale for this decision was that since the building managers are responsible for the general upkeep of their facilities, they would interact with the Customer Service Unit on a regular basis and could provide a realistic evaluation of the people in it. As a result, the building managers served as one of two research populations. The building manager population size was estimated to be *12,000*. The second population selected for the survey was the BCE commanders. They provided a source for comparison in the analysis portion of the research. This population size was 84.

Since the survey was restricted to the CONUS, the building managers from four major air commands; SAC, MAC, ATC, and AFSC were selected to be surveyed. Building managers from TAC bases were excluded because personnel from these bases were being surveyed by another researcher for a related thesis. The bases from these four major air commands were grouped into the following categories:

small--personnel strength less than 4000

medium--personnel strength 4000 to 7500

large--personnel strength greater than 7500.

The groups were formed on the basis of combined civilian and military personnel strength as reported in the May 1985 issue of Air Force Magazine. Once the bases were grouped by command and by size, one base from each category was selected (a total of 12) using simple random selection. Each CONUS Air Force base selected for the survey is highlighted with an asterisk in Appendix A.

Once the two survey populations were established, samples had to be selected from these populations. A total of 2400 personnel were to be randomly (simple random) selected from the building manager population lists provided by the Real Property Section of the civil engineering squadrons (200 from each of the 12 bases referenced above). This sample size was based on an estimated two-thirds return rate needed to obtain 0.95 accuracy in the analysis. However, only 1357 were selected (approximately 150 per base). The reasons are presented in Chapter Five.

Sixty-five Base Civil Engineering commanders were selected from the BCE commander population for the second sample. These commanders were selected from official computerized personnel records maintained at the Air Force Military Personnel Center (AFMPC), Randolph AFB, Texas. These records produced the specific names and addresses for

each commander. Since the sample size was relatively small, a census of all non-TAC commanders identified from the records was conducted. As noted earlier, TAC commanders were excluded because of the TAC-specific research being conducted by another researcher.

Survey Instrument

To identify the customer management skills considered important to the customer, a survey questionnaire was developed to collect the data needed to answer the investigative questions asked in Chapter One. This same questionnaire was used to gather comparison data from the BCE commander sample. The proposed questionnaire was pretested for clarity and validity among the Graduate Engineering Management (GEM 86S) class members of AFIT, Wright-Patterson AFB, OH. Several revisions suggested from the pretest responses were included in the questionnaire before it was forwarded to the Personnel Survey Branch, AFMPC, on 10 April 86 for approval.

The approved questionnaire was assigned USAF survey control number 86-63 with an expiration date of 31 Jul 86. Copies of the questionnaire were then mailed to the Base Civil Engineering commanders for the bases shown in Appendix A on 21 May 86 and to the building managers of the 12 selected CONUS bases beginning 15 Jun 86. The questionnaires were marked by base size, but neither this indication nor the

questions in the questionnaire itself could identify individual respondents or their Air Force base location. These actions assured respondent anonymity.

The survey questionnaire sent to the building managers and the BCE commanders consisted of four parts. Part I requested the following base specific data: pay grade of the respondent, host command of the base, whether or not the AF CE customer service unit provided a notification call prior to the craftspeople arriving or a follow-up call after their work was completed, and whether or not the customer knew if an active public relations program was conducted by the civil engineering squadron. This information was used for statistical analysis of the responses to Parts II and III of the questionnaire and answered investigative question number one: Who are the customers of the Air Force Civil Engineering Customer Service Unit? The host command portion of this data helped answer investigative question number two: Do their perceptions of customer service vary by major air command or size of the military installation?

Part II of the questionnaire asked the respondents to rate, on a six-point Likert scale (1 = terrible, 2 = poor, 3 = satisfactory, 4 = good, 5 = outstanding, and 6 = don't know), the importance he/she would assign to 23 different attributes and customer management skills. These were distilled from the items identified by the theorists summarized in Chapter Two. Part II also invited respondents

to provide an overall rating of the civil engineering Customer Service Unit and to write-in additional customer service attributes they used for evaluation that were not listed in the original twenty-three.

Part III of the survey asked respondents to rank the five customer management skills they perceived to be most important in measuring their perception of the Customer Service Unit at their base. These rankings were used to answer investigative questions three and four: What kinds of customer service representative characteristics are important to the customer? How well is the Air Force Civil Engineering customer service representative performing in these areas?

Part IV allowed for open-ended responses and any additional comments the respondents might wish to make concerning the one most important thing the AF CE Customer Service Unit at their base could do to improve customer service. They were also asked to comment on the most effective customer service characteristic they observed at their base or at any other Air Force base. These questions were included to identify any unrecognized strengths or weaknesses of the various civil engineering organizations. This information may be particularly valuable for follow-on research. A summary of selected comments is presented in Appendix D.

A copy of the cover letters and the questionnaire are included in Appendix B.

Analysis

Survey responses were coded into a computer file for analysis. A descriptive presentation of the survey data is presented in Chapter Four.

For Part I of the survey, the responses identifying the pay grade of the respondent, major air command of the respondent, knowledge of pre- and postnotification calls, and knowledge of a public relations program were nominal level data. The number of responses in each category were computed for all data collected in Part I. In addition, percentages were calculated for the pay grade and major air command categories.

The data collected in Part II were ordinal level data. The mean ranges of response and standard deviations, excluding responses of "don't know", were calculated for the ordinal data gathered in this part. Although these measures are usually appropriate only where data is of at least interval level, if the assumption is made that the intervals between the scale responses are of equal value, which the wording of the scales was intended to portray, then the ordinal data gathered can be treated as interval level data (12:88-91).

A summary was prepared showing the BCE commander and building manager mean assessments and standard deviations for each characteristic. The optional characteristics identified by the respondents are summarized in Appendix C.

The "by command" and "by base size" analyses originally planned for could not be performed because the return rates in each category were not high enough to perform meaningful analyses. The assessments were done, however, on a combined basis to help determine how civil engineering customer service representatives were perceived to be performing.

To further refine the individual ratings from Part II, Part III requested the respondents to rank what they perceived to be the five most important customer service characteristics. Points were assigned to each characteristic based upon the number of first, second, third, fourth, and fifth place votes each characteristic received. Five points were awarded for each first place vote, four points for each second place vote, three points for each third place vote, two points for each fourth place vote, and one point for each fifth place vote. The five characteristics having the highest total points were considered by the respondents to be the most important characteristics in defining effective customer service. Point values for each characteristic, along with the top five characteristics identified, are also presented in Chapter Four.

Part IV of the survey allowed for open-ended responses to identify any strengths or weaknesses Part II may have failed to identify. These responses are nominal level data and they, along with their frequencies of occurrence, are presented in Appendix D.

IV. Results

This chapter presents the data collected by the survey questionnaire. The data are presented in the same sequence they were asked in the questionnaire: demographic data; characteristics evaluated; characteristics perceived as most important; and open-ended responses. For the building manager sample, 862 surveys representing 63.5 percent of those distributed were returned. However, of those returned, 181 were undeliverable due to inaccurate building manager listings (120 from one base alone) and 32 arrived after the data cutoff date of 21 Jul 86. As a result, only 649 surveys representing 47.8 percent of the building manager sample were usable for analysis. For the BCE commander sample, 45 surveys representing 69.2 percent of those distributed were returned. Of these, only one was undeliverable (addressee unknown).

Demographic Data

In Part I of the questionnaire, respondents were asked to provide some demographic data and also answer three questions about the public relations program at their base. The demographic breakdown of the returned surveys is shown in Tables 4.1 through 4.5. Table 4.1 presents the pay grade, number returned, and percentage returned for each category of respondent, Table 4.2 presents the return rate by command,

TABLE 4.1

Pay Grade of Respondents

Pay Grade	Number Returned	Percent Returned
E1 - E3	11	1.7
E4 - E6	349	53.8
E7 - E9	214	32.9
O1 - O3	47	7.2
O4 - O6	16	2.5
Other	12	1.9
Total	649	100.0

TABLE 4.2

Return Rate of Survey Respondents

Command	Number Distributed	Number Returned	Percent
AFSC	197	95	48.2
ATC	436	303	69.4
MAC*	369	195	52.8
SAC	355	215	60.6
MISC**	-0-	22	----
Total	1357	830	61.2

*Includes Air Force District of Washington (AFDW)
**Includes those who did not respond to the host command question and those who identified themselves as part of a TAC tenant organization. This also applies for tables 4.3 through 4.5.

and Tables 4.3 through 4.5 summarize the responses to the questions regarding prenotification calls, postnotification calls, and whether the respondents knew of an active public relations program at their base.

TABLE 4.3

Prenotification Calls

Command	Yes	No	Don't Know	Sometimes*	No Response
AFSC	13	62	12	1	-
ATC	34	134	10	1	-
MAC	26	128	11	5	-
SAC	43	126	16	5	-
MISC	8	10	--	-	4
Total	124	460	49	12	4
BCE	25	12	3	2	2

*Though not a survey response, this category was written-in often enough to warrant its inclusion

TABLE 4.4

Postnotification Calls

Command	Yes	No	Don't Know	Sometimes	No Response
AFSC	12	65	11	-	-
ATC	14	153	12	-	-
MAC	12	146	9	3	-
SAC	10	163	16	1	-
MISC	1	16	--	1	4
Total	49	543	48	5	4
BCE	10	24	5	3	2

TABLE 4.5

Public Relations Program

Command	Yes	No	Don't Know	Sometimes	No Response
AFSC	53	23	11	1	-
ATC	68	78	33	-	-
MAC	55	73	37	5	-
SAC	58	76	52	4	-
MISC	10	3	5	-	4
Total	244	253	138	10	4
BCE	30	9	1	2	2

Customer Service Characteristics Evaluated

In Part II of the questionnaire, respondents were asked to rate the service provided by the Civil Engineering Customer Service Unit at their base by evaluating 23 suggested characteristics, by providing an overall rating of the Customer Service Unit, and by writing-in any additional characteristics they use to evaluate customer service. Table 4.6 summarizes the mean assessment level assigned to (1 = terrible, 2 = poor, 3 = satisfactory, 4 = good, 5 = outstanding) and standard deviation of each suggested customer service characteristic. It also shows the overall perception rating of the building managers and the BCE commanders with the Customer Service Unit. Additional characteristics and their relative frequency of response are listed in Appendix C.

TABLE 4.6

Mean Assessment Levels

Characteristic Number	Description	BCE Assessment	Std Dev	Bldg Mgr Assessment	Std Dev
1	Ringtime	4.219	.681	3.828	.892
2	Phone Courtesy	4.116	.754	3.795	.912
3	In-person courtesy	4.273	.652	3.893	.806
4	Grooming	4.182	.649	3.826	.792
5	Dress	4.159	.638	3.960	.762

(continued)

TABLE 4.6--Continued

Characteristic Number	Description	BCE Assessment	Std Dev	Bldg Mgr Assessment	Std Dev
6	Work Area neatness	3.818	.805	3.862	.790
7	Public relations	3.522	.917	3.214	.917
8	Customer service rep. commitment	4.159	.705	3.365	.949
9	Morale/esprit	3.909	.848	3.362	.903
10	Competence	3.818	.716	3.427	.816
11	Optimism	3.955	.852	3.294	.997
12	Knowledge (organizational capability)	3.841	.767	3.404	.943
13	Say vs do	3.545	.752	3.074	.983
14	Concern	3.750	.678	3.090	.984
15	Attitude	3.860	.814	3.341	.954
16	First impression	3.773	.670	3.465	.933
17	Forms	3.500	.866	3.470	.990
18	Referrals	3.591	.577	3.246	.976
19	Complaint handling	3.591	.672	3.152	.985
20	Angry customers	3.500	.713	3.178	.934
21	Communication	3.636	.606	3.423	.888
22	Support	3.841	.705	3.241	1.030
23	Timeliness	3.545	.865	2.910	1.136
Overall		3.786	.674	3.283	.897

Characteristics Perceived to be Most Important

In Part III of the questionnaire, respondents were asked to rank order the five characteristics they perceived to be most important in defining effective civil engineering customer service. Using the weighted value technique described in Chapter Three, point values were determined for each of the characteristics on the following basis:

1. Five Points for each time a characteristic was selected most important.
2. Four points for each time a characteristic was selected second most important.
3. Three points for each time a characteristic was selected third most important.
4. Two points for each time a characteristic was selected fourth most important.
5. One point for each time a characteristic was selected fifth most important.

Total points for each of the original characteristics are shown in Table 4.7. The five characteristics with the highest total point values were considered to be the most important in defining effective Air Force Civil Engineering customer service. The top five characteristics selected by the responding building managers are shown in Table 4.8 and those selected by the responding BCE commanders are presented in Table 4.9.

TABLE 4.7

Point Values for Most Important Characteristics

Characteristic Number	Description	Bldg Mgr Points	BCE Points
1	Ringtime	155	3
2	Phone courtesy	469	33
3	In-person courtesy	459	61
4	Grooming	79	3
5	Dress	5Ø	3
6	Work area neatness	38	5
7	Public relations	121	5
8	Customer service rep. commitment	716	86
9	Morale/esprit	59	Ø
1Ø	Competence	928	61
11	Optimism	277	36
12	Knowledge (organizational capability)	576	47
13	Say vs do	373	37
14	Concern	596	53
15	Attitude	247	25
16	First impression	82	12
17	Forms	188	1
18	Referrals	179	4
19	Complaint handling	219	1Ø
2Ø	Angry customers (continued)	75	Ø

TABLE 4.7--Continued

Characteristic Number	Description	Bldg Mgr Points	BCE Points
21	Communication	229	28
22	Support	582	1
23	Timeliness	872	36

TABLE 4.8

Five Characteristics Perceived Most Important by Building Managers

Characteristic Number	Description	Level of Importance	Total Points
10	Competence	1	928
23	Timeliness	2	872
8	Customer service rep. commitment	3	716
14	Concern	4	596
22	Support	5	582

TABLE 4.9

Five Characteristics Perceived Most Important by BCE Commanders

Characteristic Number	Description	Level of Importance	Total Points
8	Customer service rep. commitment	1	86
3	In-person courtesy	2	61
1Ø	Competence	3	61
14	Concern	4	53
12	Knowledge (organizational capability)	5	47

Open-ended Responses

A summary of selected open-ended responses is presented in Appendix D. Appendix D is divided into two parts. The first part summarizes what building managers and BCE commanders feel is the most important thing the civil engineering customer service unit at their base can do to improve customer service. The second part of Appendix D summarizes what both feel is the most effective civil engineering customer service characteristic they have observed at their base or at any other base.

V. Analysis and Discussion

This chapter provides the analysis and discussion of the results presented in Chapter Four thus answering the investigative and research questions presented in Chapter One. Each question is analyzed separately.

Investigative Question 1

Who are the customers of the Air Force Civil Engineering Customer Service Unit?

When McKnight and Parker performed their research to define an organizational effectiveness model within base level civil engineering organizations, they surveyed the wing, base, and BCE commanders. However, they did not address some of the people who provide these commanders the information they used to make their judgements. These people are the building managers within their organizations. As a result, building managers in this research were considered the customers of civil engineering services.

Knowledge of who the civil engineering customers are is important because it has a bearing on how the Customer Service Unit reacts. Based on the questionnaire responses, the largest portion of building managers is in the E4 - E6 pay grades (53.8%). The second largest portion is in the E7 - E9 pay grades (32.9%). Hence, based on the survey responses, 86.7 percent of the civil engineering Customer Service Unit's customers are middle and senior non-commissioned officers.

Investigative Question 2

Do their perceptions of customer service vary by major air command or size of military installation?

As mentioned in Chapter Three, the "by command" and "by base size" analyses originally planned for could not be performed because the response rates in each category were not high enough for meaningful analysis. There were two reasons for the lower than expected return rates. The first reason was that two bases, one in SAC and one in AFSC, did not provide the building manager lists requested. The original request letters and several follow-up calls failed to yield any positive results. A third base, from ATC, provided an erroneous list and as a result, 120 out of 185 surveys mailed to this base were returned undelivered.

The second reason for the lower than expected return rates is tied to a bad assumption. It was thought there would be at least 200 primary building managers available at each base surveyed. After reviewing the building manager lists, this assumption turned out to be false. Many organizations assigned a building manager to several facilities. This multiple assignment policy reduced the number of building managers available for the survey to a level more like 150 per base. This resulted in fewer surveys being distributed and returned.

To compensate for the return rate shortfalls, the categories were combined into one overall category. This

made the response rate high enough to allow a determination as to how civil engineering representatives were perceived as a whole to be doing in each area measured.

Investigative Question 3

What kinds of customer service representative characteristics are important to the customer?

BCE commanders were surveyed to compare their perceptions of their Customer Service Units with that of the building managers. The top five characteristics identified by the weighted method discussed in Chapters Three and Four yielded some interesting results.

Without considering rank order, the building managers and the BCE commanders agreed in three areas. Both groups agreed that customer service representative commitment (a care about service), competence, and the degree of concern about customer problems are important for effective customer service. However, the two groups disagreed on the remaining characteristics they considered important.

Building managers believed that timeliness and support are also important for effective customer service. These characteristics were also echoed in the open-ended responses presented in Appendix D. The timeliness characteristic may possibly be tied to the building managers' observation of work crew timeliness, not necessarily the timeliness of response of the Customer Service Unit. The potential for not separating them appears evident in the open-ended responses.

The support characteristic has this same potential flaw since it was not defined in the survey questionnaire. Specifically, support could be construed to be support by the work crews, not support by the Customer Service Unit. Further research is suggested to determine the extent of the overlap. Nonetheless, the building managers consider both to be important characteristics.

The responding BCE commanders believed that the remaining two characteristics important to them for effective customer service are courtesy of the customer service representative at the counter (in-person) and the customer service representatives' knowledge of what civil engineering can and cannot do. These two characteristics appear to be tied to the commanders' perceptions of how the Customer Service Unit is run versus what the customer is looking for. Again, further research is suggested to confirm this observation.

Investigative Question 4

How well is the Air Force Civil Engineering customer service representative performing in these areas?

Table 5.1 shows the mean assessment level in declining order for each of the original 23 characteristics evaluated by the building managers. Table 5.2 presents similar data for the BCE commanders' evaluation.

TABLE 5.1

Descending Mean Assessment Levels
(Building Managers)

Characteristic Number	Description	Mean Assessment
5	Dress	3.96Ø
3	In-person courtesy	3.893
6	Work area neatness	3.862
1	Ringtime	3.828
4	Grooming	3.826
2	Phone courtesy	3.795
17	Forms	3.47Ø
16	First impression	3.465
1Ø	Competence	3.427
21	Communication	3.423
12	Knowledge (organizational capability)	3.4Ø4
8	Customer service rep. commitment	3.365
9	Morale/esprit	3.362
15	Attitude	3.341
11	Optimism	3.294
18	Referrals	3.246
22	Support	3.241
7	Public relations	3.214
2Ø	Angry customers	3.178

(continued)

TABLE 5.1-- Continued

Characteristic Number	Description	Mean Assessment
19	Complaint handling	3.152
14	Concern	3.090
13	Say vs do	3.074
23	Timeliness	2.910
Overall		3.283

TABLE 5.2

Descending Mean Assessment Levels
(BCE Commanders)

Characteristic Number	Description	Mean Assessment
3	In-person courtesy	4.273
1	Ringtime	4.219
4	Grooming	4.182
8	Customer service rep. commitment	4.159
5	Dress	4.159
2	Phone courtesy	4.116
11	Optimism	3.955
9	Morale/esprit	3.909
15	Attitude	3.860
22	Support	3.841

(continued)

TABLE 5.2--Continued

Characteristic Number	Description	Mean Assessment
12	Knowledge (organizational capability)	3.841
6	Work area neatness	3.818
10	Competence	3.818
16	First impression	3.773
14	Concern	3.750
21	Communication	3.636
18	Referrals	3.591
19	Complaint handling	3.591
13	Say vs do	3.545
23	Timeliness	3.545
7	Public relations	3.522
17	Forms	3.500
20	Angry customers	3.500
Overall		3.786

Again, ignoring rank order for the five most important characteristics, the responding building managers rated the customer service representatives lower for each than did the BCE commanders. For commitment (a care about service), building managers gave a mean assessment of 3.365 (1 = terrible, 2 = poor, 3 = satisfactory, 4 = good, 5 = outstanding) versus the BCE commanders' mean assessment of

4.159, a significant difference in perception. (The significance for this and the other four characteristics was calculated using a Z-test for the differences between two population means. The confidence level used was Ø.95). For competence, the building managers rated the customer service representatives at 3.427 versus the BCE commanders' rating of 3.818, a significant difference. For degree of concern for customer problems, the BCE commanders rated the customer service representatives at 3.75Ø while the building managers gave them a 3.Ø9Ø, a significant difference.

Since the research is based on what the customer perceives as important, the last two characteristics to be compared are timeliness and support. The responding building managers perceived timeliness to be the lowest of all characteristics rated, with a mean assessment of 2.91Ø versus the BCE commanders' rating of 3.545, a significant difference. For support, the building managers rated 3.241 versus the 3.841 of the BCE commanders, a significant difference.

Finally, it is important to look at the customers' overall rating of how they perceive the Air Force Civil Engineering Customer Service Unit. This rating will reflect the important aspects of their evaluations as well as the less important aspects not identified in the rank ordering portion of the survey. Overall, the responding building managers rated their perception of the Customer Service Units

at 3.283--just above satisfactory. On the other hand, the BCE commanders rated their Customer Service Units at 3.786--just below good. The difference, though not numerically wide, does represent a significant difference in perception between the two groups.

VI. Summaries and Recommendations

This chapter presents the summaries of the customers' perceptions of Air Force Civil Engineering Customer Service Units. Recommendations are presented which will allow the BCE commanders to evaluate their programs and make adjustments as they see fit. Problems encountered in this research and recommendations for further research efforts are also presented.

Summaries

As noted in Chapters One and Two, it is important to know both how satisfied a customer is and what customer management skills are needed by customer service representatives to maintain high customer satisfaction. A measurement of the Air Force Civil Engineering customers' satisfaction with the Customer Service Unit and the identification of customer management skills were the specific objectives of this research.

The summaries presented below are based upon the assumption that the data obtained in this research effort are representative of the entire population. Even though TAC bases were excluded from the research, it is assumed the views expressed by the building managers of the four major air commands surveyed and the other BCE commanders are representative.

1. Building managers and BCE commanders express a difference in their overall perception ratings of the Air Force Civil Engineering Customer Service Unit. Building managers' overall perception is 3.283--just better than satisfactory--while the BCE commanders feel their overall perception rating is 3.786--just short of being good. This constitutes a significant difference in perception.

2. The five most important customer management skills the building managers feel Air Force Civil Engineering units need for effective customer service are:

a. Competence

b. Timeliness

c. Commitment of the customer service representatives to doing a good job (a care about service

d. A degree of concern about customer problems

e. Support.

3. The building managers and Base Civil Engineering Commanders both agree that commitment, competence, and a degree of concern about customer problems are important customer management skills. However, the building managers rate competence and commitment as first and third respectively while the BCE commanders rate them just the opposite.

4. The building managers disagree with the BCE commanders on two skills they believe are important for effective customer service. The building managers feel

timeliness and support are more important to them than courtesy in-person and squadron operation knowledge.

5. The building manager lists are not accurate. This was proven by the relatively high return rate of 181 undelivered surveys out of 862 total returned (21%). Ignoring the anomaly of 120 from one base, the rate is still 7%.

6. The current 555x0 training program does not include customer service training.

7. More than half of the building managers were unaware if an active public relations program was conducted by the Customer Service Unit at their base. Additionally, over 92 percent of the building managers stated they did not receive a telephone call when work was complete.

8. Though not measured in Part II of the survey, open-ended responses show that building managers are also concerned with feedback/status of their work requests.

Recommendations

Specific recommendations offered for consideration as a result of this study are presented below.

1. The Base Civil Engineering commanders should evaluate what the customers consider important for effective customer service against their own current programs. Until a formal customer service training program is developed for their customer service representatives, they should consider

developing a temporary local training program designed to enhance the customer management skills within their customer service representatives.

2. Since two important characteristics are commitment (a care about service) and a concern about customer problems, it is apparent that people oriented personnel should be assigned to the Customer Service Unit. The supervisors responsible for selecting the customer service representatives should pick people-oriented military personnel to work in the Customer Service Unit. This practice, generally done with the civilians hired into these positions, needs to be done with the military placed into these positions.

3. Air Training Command should develop a formal customer service training program for the 555xØ personnel. This recommendation can be achieved through the following actions:

a. Develop a resident two- or three-day customer service training program to be offered during initial technical school training. The course should reflect those skills deemed important by the customer but should also reflect the material offered in civilian industry.

b. Develop an on-site training seminar for the customer service representatives currently in the field. The seminar should contain the same material developed for the technical school training course.

c. Include customer service related measurements for the evaluations of the on-the-job training programs.

4. The School of Civil Engineering, AFIT, Wright-Patterson AFB, OH should continue its customer service education and expand the presentation to include all courses offered. Special emphasis should be placed on those characteristics considered important both by the customers and by the BCE commanders. Additionally, seminars should be developed, similar to others already conducted by the School of Civil Engineering, that can be used on-site.

5. The civil engineering squadrons must ensure the error rate of their building manager list is as low as possible (e.g., less than 5%).

6. Provide a copy of this report to each Base Civil Engineer commander within the CONUS.

Limitations and Recommendations for Further Research

This author is aware of specific limitations in this research effort. Although these limitations do not negate the results of the study, they should be considered by researchers contemplating follow-on research.

1. The most significant limitation concerns the survey questionnaire. The five-point Likert scale used to rate the perceived importance of each customer service characteristic restricted the response spread, resulting in a narrow range of data. Most responses tended to migrate

toward the mid-range (satisfactory). Future researchers may want to consider expanding to a wider scale (such as seven points) than that used in this study, especially if regression or factor analysis is being considered.

2. Although the return rate for the survey questionnaire was high enough for an overall analysis, it was insufficient to determine if base size or major air command influenced the perceptions. Future researchers should consider a complete census of the building manager population to obtain absolute certainty.

3. Because this study focused on CONUS installations, the results cannot be considered valid for overseas installations. Future researchers should consider validating these results at these installations.

4. Future researchers should attempt to clarify the "timeliness" and "support" responses the building managers deemed as important characteristics. It is not entirely clear whether the customer has distinguished between timeliness and support of the Customer Service Unit versus timeliness and support of the work crews.

5. Future researchers should attempt to clarify why the building managers and BCE commanders differed on two characteristics perceived as important for effective customer service. Efforts should focus on the possible observation that the customer is concerned with the service received

versus the BCE commander being concerned with what is required to provide the services rendered.

6. Future researchers should determine whether or not the public relations program at a base has an effect on customer satisfaction. Additionally, an attempt should be made to determine if making a postnotification call would improve customer satisfaction.

7. Further research efforts should concentrate on field testing and validating both the use of the customer management skills identified and on the training programs recommended in this research. If the programs are applicable, they should produce an increase in the customers' perceived satisfaction level.

APPENDIX A: CONUS Air Force Bases Considered

1.	Altus AFB, OK	36.	Little Rock AFB, AR
2.	Andrews AFB, MD	37.	Loring AFB, ME
* 3.	Barksdale AFB, LA	38.	Los Angeles AFS, CA
4.	Beale AFB, CA	*39.	Lowry AFB, CO
* 5.	Blytheville AFB, AR	40.	Malsmstrom AFB, MT
* 6.	Bolling AFB, DC	41.	March AFB, CA
< 7.	Brooks AFB, TX	42.	Mather AFB, CA
8.	Carswell AFB, TX	43.	Maxwell AFB, AL
9.	Castle AFB, CA	44.	McChord AFB, WA
10.	Chanute AFB, IL	45.	McClellan AFB, CA
11.	Charleston AFB, SC	46.	McConnell AFB, KS
12.	Cheyenne Mt, Co	47.	McGuire AFB, NJ
13.	Columbus AFB, MS	48.	Minot AFB, ND
14.	Dover AFB, DE	49.	Norton AFB, CA
15.	Dyess AFB, TX	50.	Offutt AFB, NE
*16.	Edwards AFB, CA	*51.	Patrick AFB, FL
17.	Eglin AFB, FL x 3	52.	Pease AFB, NH x 2
18.	Ellsworth AFB, SD	53.	Peterson AFB, CO
19.	Fairchild AFB, WA	54.	Plattsburg AFB, NY
20.	F.E. Warren AFB, WY	*55.	Pope AFB, NC
21.	Ft Sam Houston, TX	<56.	Randolph AFB, TX
22.	Goodfellow AFB, TX	57.	Reese AFB, TX
23.	Grand Forks AFB, ND	58.	Robins AFB, GA
<24.	Griffis AFB, NY	59.	Scott AFB, IL
25.	Grissom AFB, IN	60.	Sheppard AFB, TX
<26.	Gunter AFS, AL	61.	Tinker AFB, OK
*27.	Hanscom AFB, MA	62.	Travis AFB, CA
28.	Hill AFB, UT	63.	USAF Academy, CO
29.	Hurlburt Field, FL	<64.	Vance AFB, OK
30.	Keesler AFB, MS	*65.	Vandenberg AFB, CA
<31.	Kelly AFB, TX	66.	Whiteman AFB, MO
32.	K.I. Sawyer AFB, MI	*67.	Williams AFB, AZ
*33.	Kirtland AFB, NM	68.	Wright-Patterson AFB, OH
<34.	Lackland AFB, TX	69.	Wurtsmith AFB, MI
*35.	Laughlin AFB, TX		

*Building managers selected for survey
<Did not receive BCE commander survey

APPENDIX B: Survey Questionnaire

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE MANPOWER AND PERSONNEL CENTER
RANDOLPH AIR FORCE BASE TX 78150-6001

REPLY TO ATTN OF: DPMYOS

8 MAY 1986

SUBJECT: Request for Approval of Survey

TO: AFIT/LSH (Dr Weaver)

"Customer Perceptions of Air Force Civil Engineering Customer Service Units" survey has been approved for administration to military building managers and base civilian engineering squadron commanders. The USAF Survey Control Number (SCN) is 86-63 and expires on 31 Jul 86. If you have any questions, POC is Mr Lou Datko, AUTOVON 487-5680.

FOR THE COMMANDER

CHARLES H. HAMILTON, GM-13
Chief, Personnel Measurement Divison

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6583

20 MAY 1996

REPLY TO
ATTN OF LSG

SUBJECT Customer Service Survey

TO Building Manager

As part of a thesis effort at the Air Force Institute of Technology (AFIT), I am attempting to develop a profile of what you, the building manager, believe makes a good civil engineering customer service representative. As a building manager, you are in a unique position to provide a critical body of information needed for this effort. While completion time of the questionnaire should take no more than ten minutes, your opinions are essential to this effort. I intend to model a typical civil engineering customer service representative based upon the characteristics you and other building managers identify through the questionnaire.

The attached questionnaire requests your judgments concerning which criteria or characteristics define an effective civil engineering customer service representative at your base. Copies of this questionnaire are being sent to other building managers both at your base and at other randomly selected Air Force bases throughout the continental United States.

Although participation in this survey is entirely voluntary and your anonymity will be assured, the accuracy of the profile depends on the information you provide. I will appreciate your help in completing the questionnaire and returning it in the envelope provided. Please return the questionnaire within ten days of receipt.

DANNY S. LONG, ~~Captain~~, USAF
AFIT Graduate Student

2 ATCH
1. Questionnaire
2. Return Env

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6583

20 MAY 1986

REPLY TO
ATTN OF LSG

SUBJECT Customer Service Survey

TO Base Civil Engineer

In recent years, books such as In Search of Excellence, A Passion for Excellence, and Service America have stressed the importance of high-quality customer service in civilian organizations. Good customer service is equally important in Air Force Civil Engineering, and our customer service representatives are key players in achieving this goal. As a student at the Air Force Institute of Technology, I am requesting a few minutes of your valuable time to help us develop a profile of our customer service representatives as viewed by both BCEs and customers. Your squadron and base were randomly selected for this research. Thus, your help is essential to the research.

Specifically, I need two kinds of information. First, I ask that you give your perspective as BCE by supplying the information listed on the short questionnaire attached. It allows you candidly to rate your customer service representatives' performance in important service areas. All replies are totally anonymous, to make it easier for BCEs to indicate where their service representatives are performing well--or where they need to improve.

And second, I request an accurate copy of your building managers list. I need this list as soon as possible so I can survey randomly selected building managers at your base on the same topics. All BCE and building manager replies will be pooled to develop a profile of what each group believes makes a good customer service representative. These profiles will then be compared to each other. The intent of the comparison is to help us improve (if necessary) our customer service operations.

Thank you in advance for your invaluable contribution to this project.

DANNY S. LONG, Captain, USAF
AFIT Graduate Student

2 ATCH
1. Questionnaire
2. Return Env

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6583

REPLY TO ATTN OF: LSG

SUBJECT: Customer Service Survey

TO: Base Civil Engineer

In recent years, books such as In Search of Excellence, A Passion for Excellence, and Service America have stressed the importance of high-quality customer service in civilian organizations. Good customer service is equally important in Air Force Civil Engineering, and our customer service representatives are key players in achieving this goal. As a student at the Air Force Institute of Technology, I am requesting a few minutes of your valuable time to help us develop a profile of our customer service representatives as viewed by BCEs. To develop an accurate profile, your help is essential.

Specifically, I need for you to give your perspective as BCE by supplying the information listed on the short questionnaire attached. It allows you candidly to rate your customer service representatives' performance in important service areas. All replies are totally anonymous, to make it easier for BCEs to indicate where their service representatives are performing well--or where they need to improve.

All BCE replies will be pooled to develop a profile of what they believe makes a good customer service representative. This profile will then be compared to a similar one developed by the building managers randomly selected from twelve CONUS Air Force bases. The intent of the comparison is to help us improve (if necessary) our customer service operations.

Thank you in advance for your invaluable contribution to this project.

DANNY S. LONG, Captain, USAF
AFIT Graduate Student

2 ATCH
1. Questionnaire
2. Return Env

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6583

20 MAY 1986

REPLY TO ATTN OF LS

SUBJECT Customer Service Survey

TO Base Civil Engineer

1. Please take a few minutes to complete the attached questionnaire.

2. This thesis effort will be especially helpful to the civil engineering units by helping improve their customer service operations; in addition, you will help the student complete a vital educational objective. Thank you for your assistance.

LARRY L. SMITH, Colonel, USAF
Dean
School of Systems & Logistics

3 ATCH
1. Student Ltr
2. Questionnaire
3. Return Env

BASE SIZE A B C

SURVEY CONTROL NUMBER 86-63
EXPIRES 31 JUL 86

SURVEY OF CUSTOMER
PERCEPTIONS OF AIR FORCE CIVIL ENGINEERING
CUSTOMER SERVICE UNITS

Although at the time of mailing, the questionnaires were marked with an A, B, or C to indicate the size of the base, this information will be used for statistical analysis only. Your anonymity will be assured as neither this code nor your responses on the questionnaire will identify the results by respondent or base.

PART I

1. What is your pay grade?

(1) E1 - E3
(2) E4 - E6
(3) E7 - E9
(4) O1 - O3
(5) O4 - O6
(6) Other_____(Please Specify)

2. What is the host command at your base?

(1) AFLC
(2) AFSC
(3) ATC
(4) MAC
(5) SAC
(6) TAC
(7) SPACE COMMAND
(8) Other_____(Please Specify)

Please indicate if the civil engineering customer service unit at your base does any of the following.

3. Provides a notification call before the craftspeople arrve.

_____ Yes _____No _____ Don't Know

4. Provides a follow-up call after the craftspeople are finished with their work.

_____Yes _____No _____ Don't Know

5. Conducts "formal" public relations(e.g., articles in the base newspaper, briefings, etc.).

_____Yes _____No _____ Don't Know

Part II

Following is a list of criteria that are useful in evaluating the service provided by Civil Engineering Customer Service Units to you as a building manager. Please indicate how well the customer service unit at your base performs in each of these important areas. In the space before each criterion, place one number from the scale at the top of the page to record your evaluation. (Space for added comments is provided at the end of the survey).

Terrible	Poor	Satisfactory	Good	Outstanding	Don't Know
1	2	3	4	5	6

Please use the scale above to classify each of these criteria. Your responses should reflect your interaction with the civil engineering customer service unit at your base as you deal with them over the telephone.

__ 1. Telephone ringtime(e.g., less than 5 rings).

__ 2. Courtesy of the customer service representative on the phone.

Please use the scale above to classify each of these criteria. Your responses should reflect your interaction with the civil engineering customer service unit at your base as you deal with them in person.

__ 3. Courtesy of the customer service representative.

__ 4. The grooming standards of the customer service representatives.

__ 5. The dress of the customer service representatives.

__ 6. Neatness of the customer service unit work area.

Please use the scale above to classify each of these criteria. Your responses should reflect your interaction with the civil engineering customer service unit at your base as you deal with them in any situation.

__ 7. Public relations effort.

__ 8. Commitment of the customer service representatives to doing a good job (a care about service).

__ 9. Morale/esprit d'corps.

Terrible	Poor	Satisfactory	Good	Outstanding	Don't Know
1	2	3	4	5	6

__ 1Ø. Competence.

__ 11. The sense of optimism shown (a "can do" attitude).

__ 12. The customer service representative's knowledge of what civil engineering can and cannot do.

__ 13. What customer service representatives say versus what gets done.

__ 14. The degree of concern about customer problems.

__ 15. The attitude of the customer service representatives supervisors about customer problems.

__ 16. Your first impression of the people manning service call/customer service unit.

__ 17. The number of forms required to initiate a service call.

__ 18. The method the customer service representatives use to reference your request to the appropriate person and phone number.

__ 19. The method of handling any complaints you have.

__ 2Ø. The method of dealing with any anger you may express.

__ 21. Communication ability.

__ 22. Support.

__ 23. Timeliness.

Please use the scale above to rate your overall perception of the civil engineering customer service unit <u>at your base</u> and place the number in the following space ___.

Please [1] add any additional characteristics you use to evaluate the customer service unit within the civil engineering squadron at your base and [2] indicate your level of satisfaction using the same scale on the previous pages.

__ 24. _____

__ 25. _____

__ 26. _____

PART III

Using the criteria listed on this questionnaire (Items 1-26) select those five you feel are most important in measuring your perception of the customer service unit within the civil engineering squadron at your base. Indicate your ranking of the five criteria by inserting their item numbers in the blanks below.

FIRST SECOND THIRD FOURTH FIFTH

PART IV

What is the one most important thing the civil engineering customer service unit at your base can do to improve customer service?

_____

_____

What is the single most effective civil engineering customer service characteristic you have observed at your base or at any other base?

_____

_____

APPENDIX C: Suggested Additional Criteria

The following list contains the additional characteristics suggested by 159 building managers and by 12 BCE commanders. The frequency column indicates the number of times that a particular characteristic was suggested.

Building Managers' Responses

Characteristic	Frequency
Status update/follow-up on work	42
Response time/timeliness	30
Attitude	16
Courtesy	11
Care about service	9
Status update of materials	9
Ability to prioritize jobs	8
Work quality	8
Manpower	7
Supervision involvement	6
Referral accuracy	6
Job knowledge	5
Dress/appearance	4
Competence	4
Degree of concern about problems	3
Computers	3
Assistance with forms	3
Money	3

Support	3
Time in Planning section	2
What they say vs what gets done	2
Ringtime for phone	2
Ability to handle angry customers	2
Communication ability	2
Building manager training program	2
Professionalism	2
Knowledge of tenant requirements	1
Working relationship	1
Explain what they are doing	1
Patience	1
Building inspections	1
Customer service brochure	1
Safety	1

BCE Commanders' Response

Follow-up	2
Overall knowledge of entire CES prog.	2
Administrative organization	2
Timeliness of job order response	1
Help customers define requirements	1
Exercise judgement of difficult request	1
Recommend realistic alternatives	1
Ability to solve the problem	1
Material control support	1

IWP	1
Emergency response	1
Location of customer service	1
Compare to similar civilian responses	1
Compare to AFR 85-1	1
Ability to handle disaster responses	1
Handling & tracking emercency J.O.'s	1
Status of W.O.'s	1
Manning	1
Need computer	1
Facility needs upgrading	1
Customer feedback	1

APPENDIX D: Open-ended Responses

The following list contains the open-ended responses provided by 481 building managers and 36 BCE commanders. The number in parentheses indicates the number of times that a particular response occurred. Part I summarizes what the respondents felt was the one most important thing the civil engineering squadrons at their base could do to improve customer service. Part II summarizes the single most effective customer service characteristic thay have observed anywhere.

Part I

Building Managers

(90) Get work done--not wait. Get it done right the first time (timeliness).

(50) [Feedback to customer]. Periodically distribute to building managers a listing of open work orders and their current status.

(33) Be a little more of a person than a CE person (attitudes).

(29) Know the can do's and don'ts of the CE business and support by priority.

(25) Perform better follow-up to work orders.

(23) To call ahead and inform us when service personnel are coming so someone will be in the office.

(12) Contact building manager after the job is completed.

(11) More public relations.

(9) Make more customer service lines available for quicker access.

(9) Faster processing of AF 332's and better status.

(8) Increase manpower.

(8) Communicate.

(8) Improve support provided.

(8) Train to provide more competence in the new troops.

(6) Make sure that CE customer service can agree with shops and real property and know which forms to fill out, i.e., AF Form 332 or 1135.

(5) Fire who they have now and hire competent people who care and know how to do the job.

(5) Stop "pencil-whipping" closed actions.

(4) Automate records to improve their ability to track status of work order.

(3) Get more funds to support the base.

(3) Show more enthusiasm.

(3) Man the CSU after duty hours with qualified personnel. At this base, the fire department does it.

(3) Develop a system to random check work orders and how well the job is done.

(2) Visit building managers.

(2) Reduce the need for AF form 1135.

(2) Show more concern.

(2) Don't pass the buck to another shop.

(2) Being courteous to customer in customer service.

(1) Put phones in individual shops.

(1) Get a new commander.

(1) Follow-up for quality on contract work.

(1) Help us more in the picture on projects.

(1) A total and complete commitment to customer satisfaction.

(1) Be more prepared to handle out of the ordinary requests.

(1) Have more material needed to accomplish building improvements available.

(1) Develop a communication system for the section, plus have someone that makes sure they get messages if not in.

(1) Do away with controlling the self help store through customer service.

(1) Help improve the morale of the people working in customer service. They do a very difficult job and have to put up with a lot of garbage from customers about things they are not responsible for. The supervisors need to back their people up. Make sure they are taken care of.

(1) Eliminate the customer service officer or get one who is concerned about people.

(1) Improve response time for non-emergency work.

(1) Don't put me on hold when I call.

(1) Get rid of LOGCES and go to COCESS.

(1) Start taking routine requests over the phone.

(1) Upgrade design of CSU area.

(1) Should have customer service call open later than 1530.

(1) AFR 35-10 standards.

BCE Commander Comments

(7) Improve responsiveness which benefits when representatives improve in many of the areas you've listed.

(5) Honest "first answer" builds credibility with your customer. (Also quantify your answers. A "couple of days" may mean 2 days and 2 weeks later you've missed your commitment).

(3) Keep the customer informed. Communicate 2-ways.

(3) Upgrade work/reception area.

(2) Follow-up.

(2) To develop a greater level of empathy--the customer's problem is our problem.

(2) Spend more time training out people on how to deal with customers.

(1) Notify all customers before workers arrive.

(1) Establish base u-fix-it store.

(1) Treat the customers like they would want to be treated themselves.

(1) Insure assigned personnel have a positive attitude/ability to communicate.

(1) Keep current in what's going on in the shops and contract programs.

(1) Continue to learn how much work is involved in completing a job.

(1) Material control support.

(1) Handle the problem without referring customer to someone else.

(1) Try to solve problems, not just accept work.

(1) Clearly identify the job and ensure the shops know what the customer wants.

(1) Provide a one-stop shopping concept to the customer.

(1) Be well informed and knowledgeable of their job responsibilities.

Part II
Building Manager Comments

(49) Timeliness.

(39) Courtesy.

(35) A can-do attitude.

(35) Willingness to get the job done and satisfy the customer.

(17) Knowledge of what each branch of civil engineering does and whom you should talk to to work out problems.

(13) None!

(10) Response time on emergencies.

(10) Prompt and unhassled self-help store.

(7) Use of the computer system/direct dial line.

(5) Coordination of work orders between customer service and CE work crews.

(4) Communication.

(4) Ability to take care of themselves first.

(3) It's excellent!

(3) A care about service.

(3) Public relations efforts.

(2) Dealing with angry customers.

(2) Knowledge of work order status/priorities.

(2) The SMART team concept.

(2) They try very hard.

(2) Professional bearing.

(2) Being willing to get answers to my questions that he/she can't answer.

(2) The way they effectively give you the runaround on inquiries about an overdue job.

(1) New facilities.

(1) Jobs are held up in material control.

(1) Time consumption.

(1) Number of forms required to get a job done.

(1) Receptive to my needs and problems.

(1) The supportive attitude of the SMART so that the building manager can do the little work around the building.

(1) Their picnics.

(1) An active follow-up program on completed work.

(1) Contracting out critical maintenance areas to get competent and timely maintenance performed.

(1) Competence.

BCE Commander Comments

(7) Prompt, courteous service-knowing who to contact and how to ask the question.

(5) A care about service.

(3) Responding to customer inquiries.

(3) Positive can do attitude. Total dedication to serving people.

(2) Understanding the others problems--responsiveness--Get it done when you advertise--competence.

(1) Craftsmen working closely with customer service
-doing what is promised when it's promised
-if return to job site required, tell customer and return when promised
-clean-up when complete.

(1) Positive approach to solving customer problems/complaints.

(1) Dedication to the squadron and its image.

(1) Optimism.

(1) Having a system that can track status of 2,000 job orders per month without letting any "fall through the cracks".

(1) Follow-up-go the extra mile to make things happen.

(1) Don't give the customer a phone number to call for status, i.e., the J/W/O is in planning, call ext ___ for status, the J/W/O is in mat control, call ext ___ for status, the J/W/O is in engineering, call ext ___ for status.

(1) Knowledge of what's happening and how to get work done.

(1) Availability to the customer, no matter how useful.

(1) Function as a central point of contact.

(1) Supervisors calling customer after job is completed to get verbal feedback-gives customer good feeling that ce cares.

(1) Friendliness.

(1) Competent and timely.

(1) Follow the request to completion.

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VITA

Captain Danny S. Long was born on 13 August 1953 in Highland Park, Michigan. He graduated from high school in Mt. Clemens, Michigan in 1971 and attended General Motors Institute of Technology for three and one-half years prior to entering the service. He graduated with a Bachelor of Science in Electrical Engineering in December 1978 from Ohio State University under the Airman's Education and Commissioning program. Upon graduation, he received a commission as a second lieutenant through OTS. He then served as an electrical design engineer at Vandenberg AFB, CA and Lajes Field, Azores, Portugal. He also served as Chief, Industrial Engineering and Chief, Requirements at Minot AFB, ND until entering the School of Systems and Logistics, Air Force Institute of Technology, in May 1985.

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Thesis Chairman: Captain Gus G. Elliott, Jr.
Assistant Professor of Civil Engineering

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SECURITY CLASSIFICATION OF THIS PAGE

This research measured the Air Force Civil Engineering customers' level of satisfaction with the service they receive from the Customer Service Units at non-TAC Air Force Bases. Twenty-three characteristics identified by the researcher from an extensive literature review and from a TDY to a major Fortune 500 company were evaluated by both building managers and BCE commanders. Overall, the building managers' perception of the Customer Service Unit is slightly better than "satisfactory" (3.283) (scale values being 1 = terrible, 2 = poor, 3 = satisfactory, 4 = good, and 5 = outstanding) while BCE commanders believe it is just short of being "good" (3.786). This is a significant difference in perception.

In addition, this research identified the five most important customer management skills the customers believe are needed for effective customer service. The identification of these beneficial customer management skills, coupled with the perception of overall satisfac tion, can serve as a guide for the customer service representative to learn from and apply while working in the Customer Service Unit.

END

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